

CLAIMS

1. A monocyte-derived multipotent cell, derived from a monocyte, which expresses CD14 and CD34.
2. A monocyte-derived multipotent cell, derived from a monocyte, which expresses CD14, CD34, CD45 and type I collagen.
3. The monocyte-derived multipotent cell according to claim 1 or 2, that can differentiate into mesenchymal cells by a culture under a condition inducing differentiation into mesenchymal tissues.
4. The monocyte-derived multipotent cell according to claim 3, wherein the mesenchymal cells are osteoblasts, skeletal myoblasts, chondrocytes or adipocytes.
5. The monocyte-derived multipotent cell according to claim 1 or 2, that can differentiate into myocardial cells by a culture under a condition inducing differentiation into cardiac muscle such as a coculture with cultured myocardial cells.
6. The monocyte-derived multipotent cell according to claim 1 or 2, that can differentiate into nerve by a culture under a condition inducing differentiation into nerve, such as a coculture with cultured nerve.
7. The monocyte-derived multipotent cell according to claim 1 or 2, that can differentiate into endothelial cells by a culture under a condition inducing differentiation into endothelium,

such as a culture under a condition maintaining endothelial cells.

8. The monocyte-derived multipotent cell according to claim 1 or 2, that can differentiate into mesodermal cells.

9. A method for preparing a monocyte-derived multipotent cell, comprising culturing peripheral blood mononuclear cells (PBMCs) in vitro on fibronectin, and collecting fibroblast-like cells expressing CD14 and CD34.

10. The method for preparing a monocyte-derived multipotent cell according to claim 9, comprising culturing in vitro on fibronectin for 5 to 14 days.

11. A mesenchymal progenitor, a mesenchymal cell or a mesenchymal tissue induced by culturing the monocyte-derived multipotent cell according to any one of claims 1 to 8, under a condition inducing differentiation into mesenchymal tissues.

12. The mesenchymal progenitor, the mesenchymal cell or the mesenchymal tissue according to claim 11, wherein the mesenchymal cells are osteoblasts, skeletal myoblasts, chondrocytes or adipocyte.

13. A myocardial progenitor, a myocardial cell or a myocardial tissue induced by culturing the monocyte-derived multipotent cell according to any one of claims 1 to 8, under a condition inducing differentiation into cardiac muscle such as a coculture with cultured myocardial cells.

14. A neural progenitor, a neuron or a nerve tissue induced by culturing the monocyte-derived multipotent cell according to any one of claims 1 to 8, under a condition inducing differentiation into nerve, such as a coculture with cultured neuron.

15. An endothelial progenitor, an endothelial cell or an endothelial tissue induced by culturing the monocyte-derived multipotent cell according to any one of claims 1 to 8, under a condition inducing differentiation into endothelium, such as a culture under a condition maintaining endothelial cells.

16. A mesodermal progenitor, a mesodermal cell or a mesodermal tissue induced to differentiate from the monocyte-derived multipotent cell according to any one of claims 1 to 8.

17. A therapeutic agent comprising as active ingredient the monocyte-derived multipotent cell according to any one of claims 1 to 8 and/or mesodermal progenitors, mesodermal cells and/or mesodermal tissues induced to differentiate from the monocyte-derived multipotent cell.

18. A therapeutic agent comprising as active ingredient the monocyte-derived multipotent cell according to any one of claims 1 to 8 and/or neural progenitors, neurons and/or nerve tissues induced to differentiate from the monocyte-derived multipotent cell.

19. A treating method comprising administering the

monocyte-derived multipotent cell according to any one of claims 1 to 8 and/or mesodermal progenitors, mesodermal cells and/or mesodermal tissues induced to differentiate from the monocyte-derived multipotent cell.

20. A treating method comprising administering the monocyte-derived multipotent cell according to any one of claims 1 to 8 and/or neural progenitors, neurons and/or nerve tissues induced to differentiate from the monocyte-derived multipotent cell.